

REMARKS

Claims 1-5, 7 and 9 are pending.

Claims 1-5, 7, and 9 stand rejected under 35 USC §103(a) as being allegedly unpatentable over Reid et al (US 2001/0015321) in view of Lowenheim text *Electroplating*, *Barsol* (US 6,921,551), and *Mayer* (US 6,946,065).

Changes in the Claims:

Claim 1 has been amended in this application to further particularly point out and distinctly claim subject matter regarded as the invention. Support for the amendment may be found in the originally filed specification, for example, at FIG. 4 and [0026].

Rejection under 35 USC §103(a) – claims 1-5, 7, and 9

Claims 1-5, 7, and 9 stand rejected under 35 USC §103(a) as being allegedly unpatentable over *Reid et al* (US 2001/0015321) in view of *Lowenheim* text *Electroplating*, *Basol* (6,921,551) and *Mayer* (US 6,946,065). This rejection is respectfully traversed.

Under MPEP §706.02(j), in order to establish a prima facie case of obviousness required for a §103 rejection, three basic criteria must be met: (1) there must be some suggestion or motivation either in the references or knowledge generally available to modify the reference or combine reference teachings (MPEP §2143.01), (2) a reasonable expectation of success (MPEP §2143.02), and (3) the prior art must teach or suggest all the claim limitations (MPEP §2143.03). See *In re Royka*, 490 F. 2d 981, 180 USPQ 580 (CCPA 1974).

Applicant respectfully submits that the proposed combination of *Reid*, *Lowenheim*, *Barstad*, and *Mayer* does not teach or suggest all of the claim limitations of claims 1-9. In particular, the combined teachings of *Reid*, *Lowenheim*, *Barstad*, and *Mayer* fail to suggest “determining a concentration of an accelerator for the high-acid electroplating solution based upon the chloride concentration and the leveler concentration **after** determining the concentration of the chloride and the concentration of the leveler” as claimed in Claim 1.

Reid teaches that the concentration of the different components is based on the “effect at each of the four phases of the electroplating process” and **not** based on the relative concentration of other additives. “The inclusion of appropriate concentrations of additives in the electroplating bath has a different and useful effect **at each of the four phases** of the electroplating process.” *Reid*: Paragraph [0020].

Lowenheim describes that “the baths must contain minor amounts of chloride ion.” *Lowenheim*: page 202. *Lowenheim* is silent as to any process sequence. In particular, *Lowenheim* does not teach or suggest as to “determining a concentration of an accelerator for the high-acid electroplating solution based upon the chloride concentration and the leveler concentration **after** determining the concentration of the chloride and the concentration of the leveler” as claimed in Claim 1.

Basol describes that “when used together, it is known that the suppressor inhibits plating on surfaces it is adsorbed and the accelerator reduces or eliminates this current or deposition inhibition action of the suppressor. Chloride is also reported to interact with these additives, affecting the performance of suppressing and accelerating species.” *Basol*: Col.11, lines 35-43. *Basol* is silent as to any process sequence. In particular, *Basol* does not teach or suggest “determining a concentration of an accelerator for the high-acid electroplating solution based upon the chloride concentration and the leveler concentration **after** determining the concentration of the chloride and the concentration of the leveler” as claimed in Claim 1.

Mayer describes that “there is also evidence for the interaction between such organic additive species.” *Mayer*: Col. 17, lines 7-8. However, *Mayer* is silent as to any process sequence. In particular, *Mayer* does not teach or suggest “determining a concentration of an accelerator for the high-acid electroplating solution based upon the chloride concentration and the leveler concentration **after** determining the concentration of the chloride and the concentration of the leveler” as claimed in Claim 1.

Applicant submits that the combined teachings of *Reid*, *Lowenheim*, *Barstad*, and *Mayer* does not teach or suggest “determining a concentration of an accelerator for the high-acid electroplating solution based upon the chloride concentration and the leveler concentration **after** determining the concentration of the chloride and the concentration of the leveler.” Thus, Applicant submits that claims 1-5, 7, and 9 recite novel subject

matter which distinguishes over any possible combination of *Reid*, *Lowenheim*, *Barstad*, and *Mayer*.

Conclusion

For all of the above reasons, applicants submit that the amended claims are now in proper form, and that the amended claims all define patentable subject matter over the prior art. Therefore, Applicants submit that this application is now in condition for allowance.

Request for allowance

It is believed that this Amendment places the above-identified patent application into condition for allowance. Early favorable consideration of this Amendment is earnestly solicited.

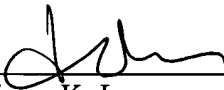
Invitation for a Telephone Interview

If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the number indicated below.

Respectfully submitted,

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